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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/715,275	11/17/2000	Jerchen Kuo	ALLOP-002	6576

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EXAMINER

HOANG, THAI D

ART UNIT	PAPER NUMBER
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2662

DATE MAILED: 05/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

B

Office Action Summary

Application No.

09/715,275

Applicant(s)

KUO ET AL.

Examiner

Thai D Hoang

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 12-16, 18 and 21-29 is/are rejected.
- 7) ☒ Claim(s) 10-11, 17, 19-20, and 30-31 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 November 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

1. The drawings are objected to because of the following informality:

The splitter/coupler (212) disclosed on the first line of page 9 is not shown in figure 2.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 15 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification does not clearly describe how the system "insert" the IP datagram into a variable length downstream and/or upstream packet. Furthermore, the specification does not define what "downstream Internet protocol datagram" and "upstream Internet protocol datagram" are; and the difference between "downstream Internet protocol datagram" and "upstream Internet protocol datagram."

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4, 7, 14, 24, and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 4, 7, 14, 24, and 27, the term "related" is a relative term, which renders the claim indefinite. The term "related" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 3-4, 6-7, 12, 14-15, 18, 21, 23-24 and 26-27 are rejected under 35 U.S.C. 102(e) as being unpatentable over Blahut, patent number EP 1,130,841 A1.

4.1 Regarding claims 1, 12 and 21, Blahut discloses a method and apparatus for TDM/TDMA communications. Blahut's system (figure 1) comprises:

an optical line terminal (OLT element 113), and
a plurality of optical network units (ONUs, element 106) connected to OLT by a passive optical network in which downstream data is transmitted from OLT to ONU and upstream data is transmitted from ONUs to OLT over a passive optical network. Blahut teaches that an OLT transmits downstream data over a passive optical network in variable length packets; and the ONUs transmit upstream data over a passive optical network within ONU specific time slots utilizing time division multiplexing, wherein ONU-specific time slots are filled with multiple variable length upstream packets (abstract, paragraphs [007]-[009] and [018].)

4.2 Regarding claims 3-4, 6-7, 15 (as best understood), 23-24, and 26-27, Blahut uses Internet protocol to transmit variable length data packets in the network (figure 1, column 16, lines 49-52). Therefore, these variable length data packets inherently include IP datagrams related to the length of IP datagrams.

4.3 Regarding claim 14, Blahut discloses a method and apparatus for transmitting variable length packet in TDM/TDMA communication system. Blahut uses Internet protocol in this system, therefore, the variable length downstream and upstream packets inherently comprise a header and a payload, and wherein each of variable length packets relates to the length of an Internet Protocol datagrams.

4.4 Regarding claim 18, Blahut discloses a method and apparatus for transmitting variable length packet in TDM/TDMA communication system. Blahut teaches that each ONU transmits one burst per frame that includes a header and a payload containing a

variable number of bytes (said ONU-specific time-slots are filled with multiple variable-length packet.)

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 5, 8-9, 13, 16, 22, 25, and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blahut, patent number EP 1,130,841 A1.

5.1 Regarding claims 2, 5, 13, 16, 22, and 25, Blahut discloses a method and apparatus for TDM/TDMA communication. However, Blahut does not disclose that the variable length upstream and downstream packets are formatted according to IEEE 802.3 standard.

However, the family of IEEE 802.3 standard is a well-known standard, which is applied in many telecommunication systems.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt IEEE 802.3 standard into Blahut's system for economic reasons since IEEE 802.3 is a widely used standard.

5.2 Regarding claims 8 and 28, Blahut discloses a method and apparatus for TDM/TDMA communication. Blahut uses Internet protocol to transmit variable length data packets in the network (figure 1, column 16, lines 49-52); therefore, these variable

length data packets inherently include the IP datagrams (said downstream data and said upstream data include Internet protocol datagrams)

Blahut does not teach the variable length upstream and downstream packets are formatted according to IEEE 802.3 standard.

The family of IEEE 802.3 standard is a well-known standard, which is applied in many telecommunication systems.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt IEEE 802.3 standard into Blahut's system for economic reasons since IEEE 802.3 is a widely used standard.

5.3 Regarding claims 9 and 29, Blahut discloses a method and apparatus for TDM/TDMA communication. Blahut does not teach that the OLT includes a fragment buffer for storing packets transmitted from ONUs (upstream); and that the ONUs include fragment buffers for storing packets that are to be transmitted from ONUs.

However, buffering data is used in almost all communications equipments.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to add buffers to Blahut's system in order to control data flow from ONUs to OLT.

Allowable Subject Matter

6. Claims 10-11, 17, 19-20, and 30-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to the application:

US patent No. 6,198,558 B1 to Graves et al

US patent No. 6,347,096 B1 to Profumo et al

US patent No. 5,189,671 to Cheng

US patent No. 5,181,106 to Sutherland

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai D Hoang whose telephone number is (703) 305-3232. The examiner can normally be reached on Monday-Friday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (703) 305-4744. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9314 for regular communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Thai Hoang
May 6, 2002


HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
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